20. (Original) An apparatus comprising:

means for modifying at least one geometry attribute of an object to preserve informative content of one or more information attributes; and

means for forming a texture map using the modified geometry attribute and the one or more information attributes;

wherein the geometry attribute is a visible defined geometric space on a display and the information attribute is related to data presented within the visible geometric space.

21. (Original) The apparatus of claim 20, further comprising means for receiving the one or more information attributes.

22. (Original) The apparatus of claim 20, wherein the informative content of the one or more information attributes is preserved by reducing contention between the geometry attribute and the one or more information attributes.

REMARKS

Applicant respectfully requests reconsideration of the prior art rejections set forth by the Examiner under 35U.S.C. §102. Applicant respectfully submits that the prior art reference of record fails to either teach or suggest Applicant's presently claimed invention.

More specifically, Applicant's claimed invention is directed to improved systems and methods for generating a three dimensional display of image data by modifying geometric

attributes of an object to accommodate information attributes. The present application provides that at least one information attribute such as, for example display text, concerning an object is received and analyzed to determine if the at least one information attribute is in contention with one or more geometric attributes such as, for example a size, of the object. When one information attribute is in contention with one or more geometric attributes, the geometric attributes are modified in order to avoid contention with the information attribute. Consequently, the present invention describes systems and methods which advantageously, automatically identify and prevent contentions between information and geometry attributes. As a result, no information is lost during presentation to a user.

The present invention claims just these characteristics. For example, claim 1 specifies receiving one or more information attributes to be applied to an object and determining if one or more information attributes are in contention with one or more geometric attributes. Claim 1 further recites that when one or more information attributes are in contention with the geometric attributes, the system modifies one or more geometric attributes in order to reduce the contention with the information attributes. Applicant has now also further specified the geometry attributes and information attributes.

Applicant respectfully submits that Putnam, U.S. Patent No. 5,262,965, neither teaches nor suggests this advance in the art. Putnam is directed to system architecture and arrangement with a processor ring (P-ring), a video ring (V-ring), and a plurality of local buses to efficiently carry out graphic image computation tasks. See Col. 3, lines 1-16. Putnam describes a rendering system using a director, tile processors, and a pixel collector to

generate an image file. See Col. 19, lines 55-64. Putman discloses that the director controls the rendering process by dividing a screen into tiles which are processed by the tile processors. See Col. 20, lines 8-13. If a tile processor fails due to lack of resources such as memory, the director replaces the tile with more smaller tiles. See Col. 20, lines 13-17. If a tile processor succeeds, the director compares the complexity of the tile to that tile processor's resources and coalesces adjacent tiles into a single tile when their complexity can be handled by that processor. See Col. 20, lines 17-24. This dynamic reallocation of work to the tile processors based on their available resources adapts the tiles so that the complexity of the tiles matches the capability of the tile processors. See Col. 20, lines 25-37. Consequently, Putnam is merely directed to an architecture which allots work based on resources thereby improving efficiency of managing graphic computation tasks.

Putnam further provides that the tile processors can be broken down to five sections: the object processor, the geometry modifier, the splitter/shader, the scan converter, and the ray/surface interceptor. See Col. 20, lines 40-48. In Putnam, the object processor culls objects from the screen tiles, collects the geometry and shading attributes for those pieces of an object which cannot be discarded, and send the geometric primitives to the geometry modifier. See Col. 20, lines 49-54. The geometry modifier then applies the geometric attribute to each piece of geometry as it comes in and produces rendering primitives. See Col. 20, lines 55-63. Thereafter, the splitter/shader shades each vertex of the primitives and divides the primitives until their screen projection is small. See Col. 20 lines 64-68 – Col. 21, lines 1-2. If and when rays are created during the shading process, the ray/surface intersector

returns the color from the rays. See Col. 21, lines 3-7. Once the screen projection is small enough, the primitives are converted to droplets and are passed onto the scan converter. This allows for a variety of shading models and techniques to be easily implement. See Col. 21, lines 7-15. Consequently, Putnam in Figures 5 and 6, with the detailed description in Cols. 20 and 21 merely discloses the rendering process. Specifically, it describes the process of how geometric attributes are applied to pieces of geometry within its architecture. The referenced portions simply do not teach or suggest identifying contention between information attributes and geometric attributes as well as modifying the geometric attributes.

Accordingly, in light of the foregoing, Applicant respectfully requests that the Examiner withdraw these rejections and allow all claims in the application.

Respectfully submitted,

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(Reg. #37,607)

Robert J. Depke
HOLLAND & KNIGHT LLP
131 S. Dearborn, 30th Floor
Chicago, Illinois 60603
Tel: (312) 263-3600
Attorney for Applicant

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Alexandria, VA 22313-1450

Attorney for Applicant

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